

## REMARKS

Claims 74-78, 81, and 83-87 are pending in the application as of entry of this amendment. Claims 79-80 and claims 88-89 are cancelled herein. Claims 74 and 85 are amended to recite a measuring terminal and a switch with the support of at least paragraphs [0089]-[0090] of the specification and Figure 7. Claim 81 is amended to depend from independent claim 74 in view of the cancellation of claim 79. No new matter has been added by way of amendment.

### **Rejections of the Claims Under 35 U.S.C. §102 and/or §103**

The Examiner rejected claims 74-79, 81, 88, and 89 under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Murata et al. (U.S. 5,423,915) in view of Patrick (U.S. 5,474,648). The Examiner also rejected claims 83 and 84 under 35 § U.S.C. 103(a) as being unpatentable over Murata et al. (U.S. 5,423,915) in view of Patrick (U.S. 5,474,648) and Hoke (U.S. 5,077,875). The Examiner further rejected claims 85-87 under 35 § U.S.C. 103(a) as being unpatentable over Murata et al. (U.S. 5,423,915). The Examiner rejected claim 80 under 35 § U.S.C. 103(a) as being unpatentable over Murata et al. (U.S. 5,423,915) and Patrick (U.S. 5,474,648) in view of Stramke (U.S. 4,645,981). This rejections of claims 79 and 80 are moot in view of their cancellation herein. Claims 75-78, 81, and 83-84 depend from claim 74, and claims 87-89 depend from claim 85.

Independent claims 74 and 85 are amended to recite a plasma processing apparatus comprising a plasma processing chamber having a plasma excitation electrode for exciting a plasma. *The apparatus includes a measuring terminal for measuring a resonant frequency of the plasma processing chamber in the vicinity of an end of the radio frequency feeder, and a switch positioned between the radio frequency feeder and the measuring terminal. The switch has a first configuration comprising a connection between the end of the radio frequency feeder and the output end of the matching circuit and a second configuration comprising a*

*connection between the end of the radio frequency feeder and the measuring terminal.* The first configuration corresponds to a plasma excitation mode of the chamber, and the second configuration corresponds to a measuring mode of the chamber.

Claim 74 further recites that the plasma processing chamber is configured such that three times a first series resonant frequency  $f_0$  of the plasma processing chamber is larger than a power frequency  $f_e$  of the radio frequency voltage, and claim 85 further recites that at least one of the shape of the radio frequency feeder, an overlapping area of the plasma excitation electrode and a chamber wall, a thickness of insulation material between the plasma excitation electrode and the chamber wall, and a capacitance between a susceptor electrode and the chamber wall is adjusted such that three times the first series resonant frequency  $f_0$  is larger than a power frequency  $f_e$  supplied from the radio frequency generator.

The claims include structural features that are not shown in the cited art. None of the references teaches or suggests a switch positioned between the radio frequency feeder and the measuring terminal having the recited configurations. Nor does the cited art teach or suggest a plasma processing chamber configured to provide the claimed relationship between the first series resonant frequency  $f_0$  and the power frequency  $f_e$ , as the Examiner has acknowledged in previous Office actions.

Accordingly, a *prima facie* case of anticipation or obviousness cannot be established with respect to claim 74 or claim 85, or any claims depending therefrom, based on the cited references. The Examiner is therefore respectfully requested to withdraw the rejections of the claims under 35 U.S.C. §102/103 and §103 over Murata, Patrick, Stramke and Hoke.

## Summary

Applicants respectfully submit that claims 74-78, 81, and 83-87 are in condition for allowance. The Examiner is respectfully requested to contact the undersigned in the event that a telephone interview would expedite allowance of the claims.

Respectfully submitted,

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